

YAMAKAWA et al., Appl'n No. 10/041,597
Amendment filed 15 March 2005
Reply to Office Action mailed 15 December 2004

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IN THE DRAWINGS:

Attached hereto is a REPLACEMENT FORMAL DRAWING for Figure 8, in which the reference numeral 2100 has been removed.

REMARKS

This Amendment is responsive to the Office Action identified above, and is further responsive in any other manner indicated below.

REPLACEMENT FORMAL DRAWING/DRAWING OBJECTIONS TRAVERSED

With regard to the section numbered "7" on page 3 of the Office Action, the reference number "2100" now has been deleted from FIG. 8, and a Replacement Formal Drawing for FIG. 8 is attached. Accordingly, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

DISCLOSURE/SPECIFICATION AMENDMENTS

The disclosure/specification has been objected to because of the Office Action concerns listed within the section numbered "8" on page 3 of the Office Action. The disclosure/specification has been carefully reviewed and has been amended where appropriate in order to address the change at page 8, line 11. That is, in the Amendment filed 7 September 2004 and again in the Response to the Notice of Non-Compliant Amendment filed 7 October 2004, by apparent clerical error, the replacement paragraph submitted for page 8, lines 5-20 was mis-identified both times as the replacement paragraph at page 9, lines 5-20. Accordingly, Applicant submits the identical replacement paragraph as filed in the 7 September Amendment which is herein properly identified as the replacement paragraph for page 8, lines 5-20. Insofar as the objections to page 8, line 28 and page 9, line 1, both informalities were previously corrected in the replacement paragraphs on pages

4 and 5 of the 7 September Amendment. Accordingly, reconsideration and withdrawal of the objection to the disclosure/specification are respectfully requested.

Any spelling, idiomatic, grammatical and/or other informality noted during further review of the disclosure/specification will be appropriately corrected.

PENDING CLAIMS

Claims 1-20 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment, and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1-26 will be pending for further consideration and examination in the application.

REWRITTEN ALLOWABLE CLAIMS

Claims 10 and 19 have been indicated as being allowable if rewritten, as indicated within the sections number "14-15" on page 9 of the Office Action, and at least appropriate base ones of such claims have been so rewritten. Further, independent Claim 10 of such claims have been minorly amended (e.g., to remove the word "rectangular") within this paper in a manner believed not to affect an allowability thereof. Reconsideration and renewal of the allowance are respectfully requested. Applicant and the undersigned respectfully thank the Examiner for such indication of allowable subject matter.

§112, SECOND PARAGRAPH REJECTION OBLIVIATED VIA CLAIM AMENDMENT

Claims 8, 11, 17 and 20 have been rejected under 35 USC §112, second paragraph, as being indefinite for the concerns listed within the section numbered "10" on page 4 of the Office Action. Such claims been carefully reviewed and carefully amended where appropriate in order to adopt the Examiner's suggested changes (for which the Examiner is thanked). As the foregoing is believed to have addressed all §112 second paragraph concerns, reconsideration and withdrawal of the §112 second paragraph rejection are respectfully requested.

REJECTION UNDER 35 USC §103-TRAVERSED

All 35 USC §103 rejections are respectfully traversed. Such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a §103 obviousness-type rejection, the reference not only must suggest the claimed features, but also must contain the motivation for

modifying the art to arrive at an approximation of the claimed features. However, the cited art does not adequately support a §103 obviousness-type rejection because it does not, at minimum, disclose (or suggest) the following limitations of Applicant's clarified claims.

More particularly, Applicant's disclosed and claimed invention is directed to electrophoretic separation arrangements which are easy/cheaper to manufacture, which can reduce background/stray light contamination, and which can analyze samples with high speed. One important feature of Applicant's invention is a planar plate that integrally includes a number of items as part of an intergral casting. For example, FIG. 6 shows a planar plate 10 which includes numerous items including optical components (e.g., excitation focusing lenses 41). By having items resultant from an integral casting, optical alignments can be made ahead of time by using a die designed to afford automatic alignment of the planer plate items during manufacture.

In terms of claim language, independent Claim 1, for example, contains the features/limitations "wherein the channel, the at least one optical component, the first flat and smooth incoming window, the second flat and smooth incoming window, the excitation transmission path, the first flat and smooth outgoing window, the second flat and smooth outgoing window and the fluorescent transmission path are part of an integral casting of the planar plate."

Regarding the applied art, neither of JP 09288090 nor WO 00/06996 disclose or suggest an integral casting having such items. For example, JP 09288090's optical fiber 8 is later adhered to JP 09288090's arrangement. As a result of the

foregoing, it is respectfully submitted that neither of JP 09288090 or WO 00/06996, or any combination thereof, would have suggested Applicant's disclosed and claimed invention.

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

One important feature of the present invention is the provision of the electrophoresis apparatus in which optical system components are integrally incorporated together with passages. That is, the optical system components are incorporated in a planar plate together with the passages so as to facilitate the alignment of the optical components. On the other hand, JP '090 discloses such a configuration that a glass fiber 8 as a light converging means is externally introduced into a substrate of an electrophoresis apparatus, as clearly understood from Fig. 1, and further, an optical slit 36 and an optical filter 37 are located above and outside of the substrate. Thus, Applicant respectfully submits that JP '090 is irrelevant to the present invention. It is noted that the methods stated in Claims 7, 8, 16 and 17 are appropriate for incorporating the optical components in the planar plate, according to the present invention.

Further, another important feature of the present invention is the provision of such a configuration that a light beam is incident upon the bottom part of the planar plate and egresses from a side part thereof, or vice versa. That is, the upper part of the substrate of the electrophoresis apparatus is complicated due to external access to a sump or the like for reserving a sample fluid, that is, insertion of electrodes,

filling of a solution or the like. According to the present invention, in order to avoid the above-mentioned complication, the light beam is thus incident upon the bottom part of the planar plate and egresses a side part thereof. (See Claims 21-22, 24 and 25.) On the other hand, JP '090 discloses incidence of a light beam upon the top surface of the substrate. Thus, also in view of this point, the cited reference, JP '090 is irrelevant to the present invention.

Further, according to the present invention, the light beams simultaneously pass through a plurality of passages. On the contrary, Li discloses the introduction of a light beam from the outside for each of passages. Further, passages disclosed in other references the examiner relies on, are separately provided, and accordingly, are irrelevant to the present invention in which the optical components are integrally incorporated in the planar plate so as to facilitate the alignment and the handling thereof. Further, it is noted here that the planar plate made of a thermoplastic polymer is not essential in the present invention.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such §103 rejection, and express written allowance of all of the §103 rejected claims, are respectfully requested.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present

application are without prejudice or disclaimer of any scope or subject matter. Further, Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

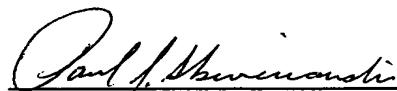
This Amendment is being filed within the shortened statutory period for response set by the 15 December 2004 Office Action, and therefore, no Petition or extension fee is required. To whatever other extent is actually necessary, Applicant respectfully petitions the Commissioner for an extension of time under 37 CFR §1.136. Attached is a Form PTO-2038 which authorizes payment of the additional

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claims fees required for entry of this paper. Please charge any actual deficiency to
ATS&K Deposit Account No. 01-2135 (as Case No. 500.41074X00).

Respectfully submitted,



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Attachments:

Replacement Formal FIG. 8
Form PTO-2038 (Fee Codes 1201/1202)